INDUSTRY SECTOR ANALYSIS

EBRD: Municipal and Environmental Infrastructure

U.S. Commercial Service Liaison to the

European Bank for Reconstruction and Development

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INDUSTRY SECTOR ANALYSIS ("ISA"):
EBRD MUNICIPAL AND ENVIRONMENTAL INFRASTRUCTURE ("MEI")

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TABLE OF CONTENTS

Executive Summary

This Industry Sector Analysis, produced by the US Commercial Service Liaison to the European Bank for Reconstruction and Development (CS-EBRD), aims to:

- Give an overview of EBRD activities in the Municipal and Environmental Infrastructure (MEI) sector
- Show the EBRD's priorities for this sector in key markets for US companies: Bulgaria, Romania, Russia, and Ukraine
- Detail three industry sub-sectors: district heating, water and wastewater management, and waste management
- Advise US companies on next steps towards working on projects.

The EBRD was created in 1991 to assist the former state-run economies of Eastern Europe and Central Asia to transition to market economies. The EBRD operates in 27 countries, and is owned by 60 countries and two intergovernmental institutions. Through its projects, the EBRD promotes democracy and encourages privatization.

Since the founding of the EBRD, its countries of operation have had to significantly upgrade their infrastructure in order to make a smooth transition to a market economy. Industries in these countries lacked modern facilities and equipment, suffered financial instability, and polluted the environment. Through EBRD-financed projects aimed at assisting their transition to market economies these countries have been able to improve their existing capabilities.

The EBRD recognizes the importance of the MEI sector to the overall development of the transition countries. In 2003, the EBRD invested €206.1 million in MEI sector projects. In 2004, it financed 12 projects and contributed €96.2 million to the sector.

The EBRD's mission in the MEI sector is to foster transition by assisting borrowers and beneficiaries to utilize modern technologies in a competitive marketplace governed by sound economic policies. The sector consists of infrastructure projects as well as projects focused on industrial waste management. For example, past projects in the MEI sector have included a wastewater project in St Petersburg, Russia that required a €24 million EBRD investment. Since 1996, the EBRD has financed 49 water projects in the MEI

sector worth a total of €830 million. Other MEI projects include a €114 million project to update the district heating system in Sofia, Bulgaria, which was partially financed by a €30 million EBRD loan. These projects highlight the EBRD's commitment to improving the MEI sector in its countries of operation. The Bank's strategy of encouraging privatization of state entities and its commitment to investing in environmentally sound projects are particularly relevant to its investments in the MEI sector.

This report includes case studies and summaries of MEI involvement in four countries, which were selected because of their particular interest to US businesses. Bulgaria and Romania are EU accession countries and are scheduled to join the EU in 2007. Therefore, there is a surge of US company interest in these markets. Russia and Ukraine are classified by the EBRD as countries at an intermediate transition stage, and there also continues to be a considerable number of EBRD funded projects in these countries. All of these countries present significant opportunities for US companies to expand into new markets.

US companies interested in consultancies can offer their services directly to organizations sponsoring projects for which the EBRD has provided some of the financing, or they can bid on EBRD or client-related consulting opportunities which the EBRD advertises on their website. Project procurement for goods and work tenders can take place via privately issued tenders (for private sector projects) or via EBRD procurement notices (for public sector projects).

CS-EBRD assists US companies to access EBRD funding through project procurement, private sector project sponsorship, and consultancy opportunities. CS-EBRD contact details are set out at the end of this document.

Note: (1) The information contained in this Industry Sector Analysis has been obtained from several sources, including the EBRD website, the CS-EBRD website, and various EBRD publications. (2) Monetary amounts stated in this Industry Sector Analysis are stated in Euros. As at the date of publication, the exchange rate was approximately €1.00 to $1.88.

SECTION 1: Introduction to the EBRD

Established in 1991, the EBRD was set up to assist the former Soviet bloc countries as they transitioned from communism and socialism to democracy and free markets. Through debt and equity investment, the EBRD helps strengthen the market economies and promote democracy in its 27 countries of operation. The EBRD is owned by 60 countries and two intergovernmental institutions. It is the largest single investor in its area of operation and by pioneering the investment frontier, the Bank encourages foreign direct investment from the private sector. The EBRD uses the extensive experience of its regional experts to create investments with satisfactory returns for the given level of risk. Though it is largely in the hands of public sector shareholders, the majority of EBRD investment goes to the private sector. For example, in 2004, more than 80% of EBRD investments were made in the private sector. When the Bank invests in publicly owned companies, it is often to bring about privatization through the restructuring of state owned firms and the improvement of municipal services.

The EBRD uses its political and governmental influence to encourage the passage of legislation that will be conducive for the development of a market economy. All of the EBRD's loans must meet the requirements of the Bank's political mandate. Certain political and economic factors must be considered before an investment is made.

The Bank's mandates include a firm commitment to protecting the environment and to supporting democratic values in the countries of operation. An investment by the Bank should help the transition to a market economy, but should refrain from encroaching upon private sector opportunities. Rather, the Bank should invest alongside the private sector, and assist in continuing the development of sound banking and accounting principles. By increasing the flow of domestic capital and supplying technical assistance (in addition to sponsoring co-financing and foreign direct investment) the EBRD fosters change within the economies of its countries of operation. EBRD investment is the incentive used to achieve EBRD goals in its countries of operation including: structural reform, competition, privatization, entrepreneurship, resourcefulness, effective judicial monitoring, capable and stable financial markets, sufficient infrastructure to meet the needs of the private sector, responsible and proactive corporate governance, and a consciousness of each company's own environmental footprint.

The largest individual shareholder in the EBRD is the United States, with a capital subscription of €2 billion. Germany, France, Italy, Japan, and the United Kingdom have each invested just over €1.7 billion. Even though the EBRD has capital totaling over €20 billion, it can also meet its lending needs through borrowing on the international capital markets. Its large paid-in capital and callable capital make it an AAA/Aaa credit risk from Standard & Poor's and Moody's, respectively. The EBRD can issue bonds at a very cost effective rate because of its outstanding credit rating.

SECTION 2: Municipal and Environmental Infrastructure (MEI): EBRD Strategy and Types of Projects

The former command economies of Central and Eastern Europe, the Baltic countries and the CIS left the Municipal and Environmental Infrastructure (MEI) sector in an unsatisfactory state characterized by environmental degradation, deteriorating facilities and equipment, financial instability, and insufficient conditions of infrastructure and services. The EBRD is committed to improving the MEI in its 27 countries of operation and has responded flexibly to the changing demands for investment in the MEI sector within these countries. Financing is provided through a range of forms, including sovereign and non-sovereign public sector loans, limited and non-recourse public funding involving private companies or public-private partnerships, and equity investments. In 2003, the EBRD invested €206.1 million in the enhancement of the sector. In 2004, it participated in 12 projects and invested €96.2 million within the sector.

The MEI team in the Bank tackles projects for direct revenue earning services such as wastewater collection and treatment, water supply, solid waste management, district heating, natural gas distribution and urban public transport. The Bank also concentrates on non-direct revenue earning services such as infrastructure projects, including the construction and repair of urban roads and environmental clean-up operations. Also included in the MEI sector are environmental services, such as industrial and hazardous waste management. A list of MEI projects signed by the Bank up to the end of 2004 is contained in Appendix 1.

For the EBRD countries of operation, the transition process to a market economy is greatly advanced by improving municipal infrastructure and services. Increasing the reliability of services and reducing overall costs promotes the emergence and development of both commercial and industrial enterprises in a country. Improvements in local living conditions boost public confidence in emerging democratic governments and in the continuing transition efforts. The EBRD's actions in the MEI sector aim to move the reformation to a market-oriented economy forward and to address existing environmental problems.

The principal objectives that the EBRD pursues in all of its MEI operations are as follows:

- Transferring power and resources from the central government to the lower levels of government; and financing of municipal infrastructure and services
- Commercialization and corporatization of services
- Promotion and optimization of private sector involvement

- Development of regulatory structures
- Environmental improvement.

These objectives are meant to serve as catalysts in stimulating rehabilitation in transitioning countries. Common concerns within the Bank's countries of operation include: rehabilitating outdated systems, concentrating on cost control issues, reducing waste and increasing energy efficiency, and developing managerial strategies. Many of the EBRD's projects have concentrated on addressing these common concerns in the sub-sectors of waste management, water and wastewater, and district heating. The influence of the Bank's activities in these sub-sectors is covered in further detail below.

SECTION 3: Municipal and Environmental Infrastructure (MEI): Industry Sub-sectors

3.1 District Heating

Between 10 and 12 percent of total energy consumption in many of the Bank's countries of operation is accountable to district heating. District heating provides hot water and space heating by means of distribution systems linked to compact residential housing, as well as public and commercial buildings. These heating systems are comprised of pipe networks, heat exchangers and in some cases, boilers.

Investment in district heating rehabilitation has proved very beneficial in restoring countries' financial and commercial standards. Emphasis has been placed on increasing private sector participation in provision of heating services and maintaining public sector support both directly and through the security of revenue collection. Where appropriately cost effective, investment is needed for the modernization of heat generation facilities, the rehabilitation of distribution networks, and the installation of equipment, such as regulation and metering at substations. This will allow for more efficient management. In order to comply with environmental and public health standards, investment is also needed to convert boilers from using coal to other sources of heat energy.

Improvements to district heating systems are a goal of the EBRD's infrastructure reform activities, particularly within the CIS and countries at an intermediate level of transition. District heating rehabilitation comprises 18% of the performed projects in the MEI sector. The use of poorly designed and badly maintained district heating systems is the one of the main causes of energy wastage, as well as a significant source of air pollution and greenhouse gas emissions. Many existing district heating systems have been designed to supply a constant flow of

maximum heat neglecting variations in demand. The heat being supplied is thus either excessive or unreliable and insufficient.

The key objectives of the EBRD's district heating projects are to improve energy efficiency in the district heating network through reduced losses, and ensure commercial and financial sustainability through the adoption of modern commercial practices such as sound pricing and subsidy reforms.

A potential for substantial gains in energy efficiency exists in price structuring and the application of better operating procedures, such as variation and control. In many instances, district heating systems are being operated below full-cost recovery. Tariffs for the heat consumption of individual units (e.g., residences) are under-billed due to the inaccuracy or non-existence of metering devices. This inability to generate sufficient cash flow, as a result of under-billing and non-payment by customers, restricts many cities' district-heating utilities from paying for much-needed investment in system rehabilitation and energy efficiency.

Past and present EBRD district heating projects include: rehabilitation and commercialization of the Lviv City district heating supply service in Ukraine; rehabilitation and modernization of existing Central Heating Sub-stations and the introduction of new, compact Individual Heating Sub-stations in residential apartment buildings in the city of Ufa in central Russia; reconstruction of a portion of the Andijan district heating network in Uzbekistan; reduction of heat transfer losses in the district heating network of Moldova; and the rehabilitation of the district heating network in the City of Kaliningrad, Russia.

3.2 Waste Management

In its region of operations, the EBRD has financed and supported waste management projects that include collection, transfer, treatment, and transport and disposal of industrial and municipal waste. Projects have been aimed at addressing problems with timely collections and inefficient separation and disposal of municipal waste. There are environmental concerns as well regarding the lack of safe disposal facilities. These include a lack of lined landfills, which can result in contamination of soil and groundwater. There is also a concern over the number of landfills that are running out of space and the lack of availability of land area for new ones. New plants, specifically waste-to-energy ones, will require a significant amount of capital as well as international expertise.

There are legal and political issues that affect the construction and financing of new landfill projects. To improve the chances for a successful overhaul of outdated waste management systems, it is important for central governments to create plans that will establish a national strategy that will support and enforce laws at the local and regional level. Economically, unless sufficient costs are associated with overused landfills, new ones will not be financially viable. This is because legislation and regulations are either not enforced or are not strong

enough to persuade companies to comply. As a result, companies continue to dump their solid waste more cheaply in overused and environmentally unsafe landfills. The economic incentive of this practice stems partially from the costs associated with constructing a new landfill. For example, unless existing out-of-date landfills are closed and all associated parties use a new landfill, it may be too expensive to build one. It is important that regulations are enforced and penalties for non-compliance are severe enough so that the cost savings of using illegal landfills are not enough to outweigh the costs of breaking the law.

Waste management legislation in these countries is an important factor in the growth and modernization of the industry. Many countries do not have sufficient resources to enforce any legislation requiring more environmentally sound and efficient waste management. Because of this, many countries have attempted to implement cleaner production methods, which should reduce the amount of waste that ultimately will require processing. These include reducing air and water pollution in the production method, conserving raw materials and energy, and focusing on proper disposal of finished goods at the end of their useful lives. To accomplish these objectives, companies in these countries must have financial incentives. However, in the long run, the savings in terms of human and environmental health should outweigh the money saved by ignoring effective waste management.

There are also a number of industrial concerns regarding waste management, specifically the disposal and treatment of hazardous waste. The use of inefficient and pollution-causing waste disposal equipment, such as old incinerators, which can cause air and water pollution, is also a concern. Many advanced transition countries[1] will have to invest in new incinerators or in rehabilitating existing ones.

Improving waste management capabilities is costly. As a result, EBRD financing has been and will continue to be an important factor in the improvement of waste management facilities and programs. Financial factors in hazardous waste management include:

- Licensing and compliance
- Fees or fines for failure to comply with laws and regulations
- Site clean up
- Building new or renovating existing waste management sites.

Previous efforts in waste management have included EBRD loans to finance projects that upgraded hazardous waste disposal sites. The goals for these projects included extending the useful lives of existing hazardous waste disposal

[1]The EBRD defines the following countries in its region as "advanced transition countries": Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovak Republic and Slovenia

sites until alternate, more environmentally friendly sites could be created. The projects also aimed to improve regulatory institutions and increase awareness of and enforcement of, environmental law in transition countries.

Other projects the EBRD has been involved with have focused on helping transition countries comply with European Union accession requirements. These requirements have mainly involved stricter environmental standards regarding solid waste management and facilities. The projects have resulted in more efficient industrial capabilities, improved local economies, and have made the industries more competitive.

Environmental concerns are also a critical factor in EBRD waste management projects. One goal of EBRD projects in this sector is to reduce the dependence of countries on landfills that are potentially unsafe. In Western European countries, on average roughly half of municipal waste ends up in landfills while roughly a quarter is incinerated and a quarter is recycled. In Russia and the CIS countries, by contrast, more than three quarters of municipal waste ends up in landfills while only a fraction of the waste is incinerated. Less than 10% is recycled. As these countries improve their waste management programs, it is hoped that the gap between these figures will narrow.

Past EBRD funded Waste Management projects have included: the rehabilitation of the Jakusevac solid waste landfill site in Zagreb, Croatia; upgrading the basic infrastructure for municipal and industrial solid waste management in Tashkent, Uzbekistan; and upgrading the hazardous waste disposal site of Krasny Bor in St. Petersburg, Russia.

3.3 Water Projects

EBRD MEI water supply projects focus on ensuring access to clean and proven drinking water supplies, modernizing the treatment of sewage, and leak reduction. Many of the countries in which the EBRD operates have inadequate water supply and wastewater infrastructure. The overall consequences are a lack of clean water needed for sanitary daily living in the countries and pollution that could be eliminated through the efficient use of modern technology.

EBRD-EU cooperation has allowed for the success of transition intensive projects and for the assimilation of EU environmental standards into the regulatory framework of the countries. Investing in the water and wastewater sector should allow states to comply with EU environmental regulations and, in the case of EU accession countries, remove an obstacle for EU entry. Many governments already have proper legislation in place, but have not policed their requirements. Improved service quality will improve the standards of living for citizens. Improved efficiency will reduce inaccurate high tariffs.

The Commonwealth of Independent States (CIS) is the area where countries are most in need of attention, facing discontinuous and/or rationed water supply. Wastewater treatment is deficient or altogether nonexistent in many of these countries. The municipalities often run the water supply and wastewater companies in an inefficient and costly manner where scarce resources are squandered. Private companies are not always run with the level of management, administration, and budgeting conscientiousness up to the standards of more established EBRD countries of operation. CIS countries have had challenges with proper pricing, largely due to difficulties with demand management. Problems controlling demand are reflected by the pricing and metering mechanisms they currently have in place. In addition to water shortages, these inadequacies also lead to the excessive use of energy in the water sector.

The EBRD has financed 49 water sector projects totaling €830 million since 1996, bringing clean and safe water to over 30 million people. This is working towards the UN Millennium Development Goal of reducing the population without access to water and wastewater by 50% before 2015.

Three of the key focus areas for the EBRD in the water and wastewater sector are decentralization, privatization, and cost recovery. Investment will not take place if these conditions are not being met. Regulation is also essential because investors want a stable environment to invest in. Most nations are well on their way to stability, having moved accountability to municipal or regional government, which generally results in improved utility performance. For the EU accession states and more advanced transition economies, the focus needs to be on rehabilitating, upgrading, and maintaining their facilities. Universally, these countries must reduce physical losses of water and groundwater seepage in sewerage systems. The progress of some countries, like Bulgaria, has not quite matched the progress of other countries in this regard. The EBRD's Early Transition Countries[2] have particular challenges. They suffer from incomplete decentralization, resulting in an ambiguous regulatory environment subject to changes with political cycles.

The EBRD is supporting the goals of decentralization and privatization by raising the level of private sector involvement and pushing for institutional and regulatory reforms. In addition, the EBRD is sustaining the decentralization of financing responsibilities when it provides loans or equity to municipalities and municipal and regional utilities without a state guarantee, thus improving each country's ability to finance capital expenditures by raising their creditworthiness. Ownership and control in these industries still remains to a great extent under municipal, state, or regional control. The EBRD has assisted with the financing of nearly all private sector participation with significant capital investments. However, only 4% of Central and Eastern Europe is served by private operators, compared to 42% in Western Europe. Major international water companies in

[2] Armenia, Azerbaijan, Georgia, Kyrgyz Republic, Moldova, Tajikistan, and Uzbekistan

the region have become increasingly risk averse and decreased their willingness to invest substantial portions of their limited resources into Central and Eastern Europe because of the extent of the restructuring required, problems achieving synergy with recent mergers, and an increased concentration on delivering shareholder value.

Another key focus area for the EBRD in the water sector is cost recovery. Cost recovery is less than 100 percent in many local authorities. In order to promote management efficiency, operating and capital costs must be compensated. Metering is the key hurdle to improve collection ratios and payment discipline. In Russia and Ukraine, less than 30% of the population is metered. Difficulties arise in some countries because of the issue of affordability, both in terms of implementing the metering system and in terms of the public being able to afford it, and the issue of a culture that does not take bill payment seriously. For example, Early Transition Countries are in the financially unacceptable situation of having tariffs cover only 30-80% of operating costs. New "cost-plus" tariff frameworks must be implemented in order to offer acceptable levels of service for consumers as well as incentives for investors.

Past water projects the EBRD has participated in include: rehabilitation, construction and development of infrastructure related with wastewater treatment in Oradea, Romania; the construction of a wastewater treatment plant for the city of Maribor in Slovenia and its surrounding area; and the extension and upgrading of the Czech Republic city of Brno's Wastewater Treatment Plant and part of the sewerage network.

SECTION 4: Country Case Studies

4.1 Bulgaria

In the countries of the EBRD region, Bulgaria is presently a popular country for foreign direct investment, due to its current favorable business environment. Reforms in Bulgaria's environmental infrastructure have accelerated in the past decade. Increasing efforts in financial and economic reform are being made to support the country's candidacy for European Union membership in 2007. Current challenges facing Bulgaria include the completion of the privatization process and the acceleration of the restructuring process for the country's public utilities. The Bank continues to build on its previous investments in Bulgaria and will likely remain the single largest foreign investor in the country's reform process.

District Heating Projects

Bulgaria's per capita energy consumption is one of the highest in the world. The EBRD's strategy revolves around improvements in Bulgaria's energy efficiency

and promoting the use of renewable energy resources, with one of its primary focuses being the rehabilitation and commercialization of the country's district heating networks. The Bank has been a major catalyst in co-financing such projects within Bulgaria—e.g., the Sofia District Heating Rehabilitation project.

In 2002, the EBRD contributed a sovereign-guaranteed loan of €30 million towards funding of a €114 million project to rehabilitate Sofia's district heating system. The system is owned and operated by Toplofikacia Sofia AD. This rehabilitation includes the installation of environmentally friendly and energy conserving equipment in the capital's sub-stations and the replacement of heating pipelines. The main objective of the project was to reach efficiency levels of international equivalent systems and to improve the overall performance of the district heating company, including areas such as commercial, financial, and environmental improvement. Toplofikacia Sofia AD accounts for 30 percent of total gas consumption in Bulgaria. By rehabilitating the existing system, over several million Euros worth of energy was saved and over 900,000 people were provided with more effective heating, thus making the project the single largest energy conservation project in Bulgaria to date.

Water and Wastewater Projects

Sofijska Voda AD, Sofia's water company, is a joint venture with the UK based multi-utility United Utilities. The Bulgarian company's partner was originally International Water, an American company owned by Bechtel and Edison. When International Water decided to exit the partnership, United Utilities asked the EBRD to help them find a replacement partner for International Water. Subsequently, the EBRD acquired a 50% stake in Sofijska Voda. In addition, in 2000, Sofijska Voda received a €31 million loan from the EBRD to enhance the maintenance of the city's pipe system, increase customer service, and implement a superior and easier billing system. For Bulgaria, these are key steps towards the privatization of the water sector.

The EBRD helped Sofia to select a concessionaire, through its assistance to the utility in achieving open and competitive international bidding and in defining parameters for private-sector participation. Sofijska Voda gained the rights to Sofia's water and wastewater services in a 25-year concession contract, which kept the ownership of assets in the city's hands. The funds from the loans and equity investments from the EBRD will be used to allow Sofijska Voda to increase its capital expenditures aimed at curbing leakage and permeation and also, to become more reliable.

As always, environmental safeguards were a precondition for EBRD investment. The EBRD will continue to monitor progress on environmental issues, the implementation and success of Environmental and Health and Safety (EHS) action plans, and the overall regulatory compliance of the companies, in order to ensure that these are in line with EBRD objectives. Sofijska Voda AD is already

in compliance with national and EU EHS standards or has adopted action plans to comply within an acceptable period of time.

4.2 Russia

Among the primary economic challenges currently facing Russia is the necessity to build a foundation for reliable long-term economic growth and a continued improvement in living standards. Through a broad range of investment projects, the EBRD has worked with Russia in its attempt to meet these challenges. In the MEI sector, the Bank plans to promote the upgrade and transformation of Russia's infrastructure through expanding its municipal projects into more regions and increasing the range of the Bank's current project portfolio.

District Heating Projects

In Russia, the Bank has worked on investments in two major district-heating projects: the Surgut Municipal Services Development Project, signed in 2002, and the Kaliningrad District Heating Rehabilitation, a project currently under consideration by the Bank.

In June 2002, the city of Surgut signed a loan agreement with the EBRD for €45 million to finance a large project to improve the provision of key municipal services for the community and to upgrade the infrastructure of the city. Disbursement of the loan began in March 2004. Around €23.7 million of the total cost of the project was earmarked for the rehabilitation and reconstruction of the city's district heating networks. Currently, there are invitations for tenders available for the procurement of goods, works and consulting services required in relation to the project. Procurement opportunities include the following:

- Rehabilitation of groundwater wells and drilling of new wells
- Construction of two new water treatment works
- Procurement of pumps and associated electrical equipment for main wastewater pumping station
- Supply and installation of frequency converters for water treatment works in the city.

In a more recent project, the Bank has been working with the City of Kaliningrad. The Kaliningrad District Heating Rehabilitation project has passed final review and is now awaiting approval from the Bank's Board of Directors. This project will be made possible by a proposed sovereign loan from the EBRD of US $12 million. One of the main objectives of the project is to guarantee the financial and commercial stability of the municipality-owned district heating company, ME Kaliningradteploset. The project seeks to implement a least-cost program and a

metering and control component to monitor energy consumption. The goal is to have tariffs adjusted to cost-reflective levels and to reform the subsidy system with a social safety net for lower income groups. The project will also reap environmental benefits -- its implementation is intended to achieve significant energy efficiency improvement through heat loss reduction and the lowering of greenhouse gas emissions. There will be procurement opportunities available through the tendering of goods, works and services in relation to this project, including:

- Refurbishment or installation of individual heating substations
- Decommissioning of coal fired boilers
- Conversion of coal fired boilers to gas
- Technical Support on project implementation.

Tendering for the above services is expected to start in 2005.

Further details of procurement opportunities can be seen on the EBRD website (select the tab “Working Together”, then the tab “Procurement”).

Water and Wastewater Projects

In response to environmental concerns in Russia, the Northern Dimension Environmental Partnership (NDEP) was established in 2002. The NDEP has been involved in two EBRD projects in St Petersburg, one of which was a Russian effort to prevent the contamination of the city’s drinking water by cleaning up its wastewater. Dried sludge extracted during the purification of the wastewater, totaling 230,000 cubic meters every year, is deposited in landfills. Toxic runoff can leak into the city’s water table. The landfill is at near capacity so St Petersburg’s water company, Vodokanal, has begun constructing an incinerator to burn the sludge. This will cut solid waste volume by 95% and assure the purity of the water supply. Construction of the incinerator is allowing Vodokanal proactively to prevent leakage from the landfills.

Overall, the St Petersburg project is just a small part of the first stage of MEI investment in St Petersburg. This project will address both environmental and privatization concerns. First, it will reduce the amount of runoff contamination released into the Baltic Sea and the Gulf of Finland, and will lead the way for the private sector to operate the water plants in St Petersburg. Secondly, the project will provide quality drinking water in St. Petersburg. Financially, Vodokanal should achieve enhanced operational efficiency, creditworthiness, and financial and operational performance. These financial improvements are key steps toward putting Vodokanal in the right position to handle long-term investment and beginning to achieve fiscal sustainability. Vodokanal has become the first

municipal utility to receive a funding from a multilateral financial institution without a state or commercial bank guarantee. This is possible because of Vodokanal's operational performance, strong management, and backing from the city of St Petersburg. A €24 million EBRD loan, as well as €6.4 million in NDEP support, financed the project. This is the fourth project the EBRD has financed involving Vodokanal, and a successful relationship is developing for both parties.

Other projects focus on the cities in Russia's regions. In February 2005 a General Procurement Notice was issued for services, works, and goods in the city of Yaroslavl. Yaroslavl Vodokanal, the municipal water utility owned by the city, has proposed a project totaling €17.8 million to improve the water and wastewater service quality. Future procurement opportunities will include:

- Upgrade of the North and South Water Treatment Plants and the booster pumping stations, including the supply of pumps and valves and a chemical dosing system, all including mechanical, electrical and instruments installation works and related engineering works
- Supply, installation and commissioning of a network operation control system with SCADA and network distribution management systems
- Construction of a new raw water main between the North and South Water Treatment Plants and repairs to parts of existing water network, including replacement of sections of pipes and valves.

Additionally, the municipal water utility of the city of Kaliningrad, Kaliningrad Vodokanal, has received a €16.5 million loan from the EBRD, to be used in the rehabilitation of the city's water and wastewater systems. Future procurement opportunities will include:

- Completion of a new water treatment plant
- Rehabilitation of an existing water treatment plant
- Groundwater well field development, upgrading and monitoring
- Completion of construction of a clean water reservoir
- A new disinfection plant

- Flow and pressure meters
- Upgrading of pumping station
- Replacement of pumps.

Waste Management

In November 2000, The EBRD financed a project to clean up the hazardous waste disposal site of Krasny Bor. Krasny Bor is St. Petersburg's only hazardous waste site and is running out of storage capacity, thus presenting health and safety risks. The project aimed to stabilize the waste site until a new facility can be built. The city of St. Petersburg received €6.2 million from the EBRD that included the construction of a waste treatment plant, a drainage system, and an environmental monitoring system.

4.3 Ukraine

Ukraine is one of the countries on which the EBRD expends the most resources, receiving, on average, 7% of the Bank's global commitments. For Ukraine, EBRD funds made up 13% of all foreign direct investments as of 2002. These figures point to a lack of investment from the private sector. However, at the same time, this does not reflect a lack of EBRD investment in Ukraine's private sector – for example, the percentage of the EBRD portfolio in the private sector in Ukraine increased from 33% in 1993 to 69% in 2002.

In recent years, there has been an unprecedented amount of economic growth within Ukraine. This growth is expected to increase further following the pro-democracy Orange Revolution in December 2004, as the newly elected president Viktor Yushchenko has put economic reform at the center of the agenda for the new Ukrainian government. The country has increased the potential for foreign direct investment by implementing a consistent tax structure, improving regulation, and improving the independence of the judiciary. To date, the Bank's involvement in Ukraine has placed emphasis on energy sector reform and the introduction of energy efficiency technologies. The focus has been on privatization of industries as the country continues to transition towards a market economy. The EBRD also has recognized the growing competency of commercial banks in Ukraine, and is providing them with the support to allow them to increasingly meet the needs of small and medium enterprises. Safety and the environment are also prime concerns, as the country has learned from the aftermath of the Chernobyl disaster. Agriculture remains a potentially lucrative sector, and record crop yields have been seen in the past five years.

Water and Wastewater Projects

The Dnipropetrovsk Municipal Water and Waste-Water Project in Ukraine was approved by the EBRD's Board of Directors in December 2004 and is currently pending signing by the client. This proposed project involves a loan to the municipal water utility of the city, Dnipropetrovsk Vodocanal. The key objectives of the project's implementation include: reducing operation and maintenance costs; alleviating water losses and discharge of untreated sewerage into the Dnipro river and the Black Sea Basin; and improving the operational and financial performance of the municipal water and waste-water services. In May 2004, the EBRD issued a General Procurement Notice for services, works, and goods in the city of Dnipropetrovsk. Dnipropetrovsk Vodocanal, the municipal water utility owned by the city, has proposed a project totaling €31 million to improve water and wastewater service quality. Future procurement opportunities, expected to begin in 2005, include the following:

- Replacement of pumps and motors at water and sewerage pump stations and automatic pump control installation
- Rehabilitation of water treatment and chlorination at Lomovka WTP, Kaidaky WTP
- Rehabilitation of wastewater treatment plants: Left Bank WWTP, Central WWTP, South WWTP
- Network and water reservoirs rehabilitation
- Leak detection equipment
- Network maintenance, sewer jetting, equipment, mobile laboratory
- CCTV and flow metering equipment
- Block meters
- Supply and installation of SCADA system
- Associated technical assistance.

In February 2005, a consultancy tender was issued for the following services:

- Consulting service to work with the Dniprovodocanal and assist with project implementation
- Associated technical assistance
- Network maintenance, sewer jetting, equipment, and mobile laboratory.
- Supply and installation of SCADA system
- Replacement of pumps and motors at water and sewerage pump stations and automatic pump control installation

While bidding for this particular opportunity has already closed, the above details indicate the type of services that the EBRD and its clients often require when a water sector project is involved.

4.4 Romania

Since the election of Prime Minister Adrian Nastase in December 2000, Romania has embarked on a comprehensive program of economic reforms. These transformations maintain an equal emphasis on both market reforms and improvement of social conditions within the country. The motivation behind the swift implementation of this program derives from Romania's desire to accede to the EU. Romania is a candidate to join the EU in the next accession round in 2007, provided it continues to make significant economic progress. Current challenges facing Romania include the slow progress of the country in achieving privatizations of state assets and structural reforms.

In Romania, the EBRD has financed projects focusing on improving the water and wastewater sectors through a facility known as the Municipal Environmental Loan Facility (MELF). The EBRD has combined with the Instrument for Structural Policies for Pre-Accession Facility (EU-ISPA) funding program to finance this facility. In addition to water programs, MELF also finances municipal solid waste management facilities. The MELF project aims to make these facilities more efficient, while reducing threats to public health and the environment, specifically by improving quality of the water supply. The environment benefits from reductions in polluting emissions, improved sanitation, reduced public safety and health risks, and more efficient use of resources. In addition, the project will encourage competition between private firms as well as increased efficiency in the sector.

Water and Wastewater Projects

In February 2005, the EBRD issued a General Procurement Notice for the procurement of goods for a water sector project in the city of Bucharest. Bucharest Wastewater Treatment Plant, the municipal water utility owned by the Municipality of Bucharest, has proposed a two-stage project to rehabilitate and complete a partially constructed line of the wastewater treatment plant and sludge treatment facilities. The tender calls for rehabilitation and completion of the partially constructed water line at the existing but non-operational wastewater treatment plant and associated sludge treatment facilities.

Additionally, Romanian Company Water Somes is seeking a €7.2 million EBRD loan as part of a project to consolidate the existing water and wastewater entities in eight cities along the Somes River into a regional water company (ROC). RAJAC Cluj, the city of Cluj's current water utility, will head ROC. Part of the project funds are being provided by the European Union, which means that some procurement opportunities may only be available to EU firms. However, other funds for the project may not be subject to such restrictions – the exact eligibility rules will have to be checked for each issued tender.

SECTION 5: Strategies for US Companies

US companies have been very competitive in winning bids for EBRD consultancy and general procurements. In consultancy contracts, the US ranked second in the world in the number of winning bids in both 2002 and 2003. US companies also won a significant percentage of top-valued consultancy contracts in those years and American firms have a higher success rate when bidding than their major European competitors. On the other hand, a relatively low number of US businesses bid for EBRD public sector goods and works contracts. To improve these figures, CS-EBRD works in association with the EBRD and other partners to try and increase the participation of US companies in projects in the Bank's countries of operation.

The US is the largest single shareholder in the EBRD, and CS-EBRD has a significant interest in encouraging US representation in EBRD projects. CS-EBRD accomplishes this by providing information to US companies about how the EBRD works. The office offers counseling sessions and guidance throughout the project cycle through in-person, telephone, or email consultations.

US businesses can become involved in EBRD-financed and private sector projects in three ways: as borrowers or investors, as suppliers of equipment and/or services, and as consultants.

1. Borrowing/Investing in Private Sector Sponsored Projects

US firms sponsoring projects need to be fully cognizant of the EBRD's mandate and criteria for projects and should have a well-prepared business plan that addresses the developmental mandate of the Bank as well as financial risk. In addition, companies should note that the EBRD typically funds only up to 35% of the total project cost in the form of debt or equity, or both. Private sector projects typically are based on 66% debt financing and 33% equity.

For more information on financing with the EBRD, see the EBRD website http://www.ebrd.com/apply/index.htm

2. Bidding on tenders

Successful US firms must be fully responsive and competitive in both the technical and financing portions of their bids. Public sector projects are a substantial source of procurement contracts for US suppliers. The EBRD's borrowers are required to follow the Bank's open tendering procedures for goods and services contracts over €200,000 and works contracts over €5 million.

3. Consulting and providing technical services

The EBRD works with consultants in three ways: executing the Bank's technical co-operation program; assisting in project preparation; and implementation and performing due diligence.

Upcoming public sector projects are listed in the "Pipeline" section of the Bank's website at: http://www.ebrd.com/oppor/procure/index.htm. For more information on procurement procedures, policies and rules, see: http://www.ebrd.com/about/policies/procure/ppr.pdf

EBRD projects present many profitable opportunities for US companies. However, in order to enhance their chances of successfully winning, companies should first develop a thorough understanding of the complex political, economic, and legal environment of the countries in which the Bank operates. US companies must have a well-defined international marketing and business strategy in order to compete on an international level with companies that have experience of working in the EBRD's region. For assistance, firms are encouraged to contact CS-EBRD for information and counseling on EBRD projects and opportunities (see Appendix 2 for contact details). In addition, contact information is provided to Commercial Service offices in Bulgaria, Romania, Russia, and Ukraine. These offices can advise on local market conditions in the countries concerned, as well as assist a company to find a local partner.

APPENDIX 1: List of MEI Projects Signed up to December 2004

Operation Name	Country	Year of Signing	Project Value	Total EBRD Finance
			€000	€000
PRIVATE SECTOR				
APA NOVA Water Treatment Plant	Romania	2002	155,185	55,443
Brno Waste Water Treatment Plant Upgrading	Czech Republic	1999	82,800	27,500
Budapest Waste Water Services Privatization	Hungary	1998	38,338	11,850
CGE MPF-Banska Bistrica Waste Management Project	Slovak Republic	1997	2,556	1,023
CGE MPF-Budapest Wastewater Service Privatization	Hungary	1998	38,338	11,850
Dubrovnik urban transport development project	Croatia	2004	7,500	7,500
Environmental Investment Fund	Regional	1997	9,177	5,000
EU/EBRD Municipal Finance Facility	Slovak Republic	2004	32,500	8,000
EU/EBRD Municipal Finance Facility	Poland	2004	40,600	10,000
International Water United Utilities	Regional	2003	39,352	18,380
MOL-Duna WWTP Outsourcing Project	Hungary	2003	38,822	13,400
Maribor Waste Water Concession	Slovenia	1999	51,053	14,800
Sofia Water System Concession	Bulgaria	2000	95,227	18,500

St. Petersburg South-West Waste Water Treatment Plant	Russian Federation	2003	188,749	35,450
St. Petersburg Water and Environmental Services Improvement Program	Russian Federation	1997	44,611	8,692
Tallinn Water Privatization Financing	Estonia	2002	172,800	55,000
Tallinn Water and Environment Project	Estonia	1994	74,562	22,723
Zagreb Waste Water Treatment Plant BOT	Croatia	2001	292,719	35,200
PUBLIC SECTOR				
Almaty Solid Waste Management Rehabilitation	Kazakhstan	2000	19,524	15,874
Andijan District Heating Improvement and Reform	Uzbekistan	2001	24,859	11,906
Archangelsk Municipal Water Services Development	Russian Federation	2003	24,694	9,394
Baku Water Rehabilitation	Azerbaijan	1995	82,406	18,034
Belgrade District Heating Rehabilitation Program	Serbia and Montenegro	2001	27,112	20,000
Belgrade Municipal Infrastructure Reconstruction Program	Serbia and Montenegro	2001	78,671	40,000
Bucharest Multi-Sector Project (Municipality)	Romania	2003	34,561	16,250
Budapest Public Transportation Rehabilitation	Hungary	1993	84,423	44,423
Bydogoszcz Water Supply	Poland	1999	59,289	22,900

Chisinau Water Services Rehabilitation	Moldova	1997	32,452	18,057
City of Kragujevac Municipal Infrastructure Reconstruction Program	Serbia and Montenegro	2002	7,780	5,000
City of Lodz Road Improvement Project	Poland	2002	19,200	6,700
City of Nis Municipal Infrastructure Reconstruction Program	Serbia and Montenegro	2002	12,390	6,000
City of Novi Sad Municipal Infrastructure Reconstruction Program	Serbia and Montenegro	2002	9,080	5,000
City of Vilnius Municipal Infrastructure	Lithuania	2003	8,540	7,000
Energy Efficiency Project	Moldova	1995	18,212	7,554
Gdansk Urban Transport	Poland	2001	26,100	12,000
Gliwice Environmental Investment Program	Poland	2002	70,200	15,000
Kaliningrad Water and Environmental Services	Russian Federation	1999	48,178	14,287
Kaunas Water and Environment	Lithuania	1995	74,545	11,864
Kaunas Water and Environment- Phase II	Lithuania	2001	73,600	14,700
Krakow Plaszow II Project	Poland	2000	79,980	21,680
Krakow Urban Transport	Poland	1998	121,800	35,000
MELF: Timisoara	Romania	2003	50,620	6,520

MELF: Subproject Arad	Romania	2001	20,150	4,500
MELF: Subproject Brasov	Romania	2002	58,700	14,500
MELF: Subproject Constanta	Romania	2000	102,600	20,000
MELF: Subproject Iasi	Romania	2001	55,000	13,200
MELF: Subproject Targu Mures	Romania	2003	27,900	7,000
Macedonia Municipal & Environmental Action Programme (MEAP)	FYR Macedonia	2000	62,763	20,800
Municipal Environmental Investment Programme	Croatia	1996	139,374	31,575
Municipal Utilities Development Programme	Romania	1995	56,028	22,224
Municipal Utilities Development Programme-Phase II	Romania	1997	152,473	59,529
Ostankino Towers Repairs	Russian Federation	2002	27,383	11,112
Regional Water and Environment Programme	Romania	1996	39,070	12,699
Riga Environment Programme	Latvia	1996	74,635	13,163
Riga Water Company Corporate Loan	Latvia	2000	133,855	35,581
Rijeka Sewerage Services Improvement Programme	Croatia	1999	8,840	8,100
Rybnik Sewerage Network Development Programme	Poland	2001	109,700	16,700

Small Municipalities Environment Project	Estonia	1995	46,025	10,226
Sofia District Heating Rehabilitation	Bulgaria	2002	110,600	30,000
Sofia Public Transport	Bulgaria	2002	52,200	20,000
Sopot Urban Transport	Poland	2001	8,224	5,000
St Petersburg Northern Waste Water Treatment Plant Incinerat	Russian Federation	2003	49,400	23,800
St Petersburg Toxic Waste Emergency Clean-up Programme	Russian Federation	2001	8,151	4,365
St Petersburg Flood Protection Barrier	Russian Federation	2002	465,986	194,460
St Petersburg Municipal Support	Russian Federation	1997	540,041	54,685
Surgut Municipal Services Development Programme	Russian Federation	2002	71,650	36,652
Tashkent Solid Waste Management Rehabilitation	Uzbekistan	1998	38,303	15,239
Thermal Energy Conservation Project (TECP)	Romania	1997	70,093	35,322
Wroclaw Multi-Sector Municipal Infrastructure Project	Poland	2000	72,253	12,178
Wroclaw Municipal Infrastructure Flood Damage Repair	Poland	1998	36,000	15,510
Wroclaw Water Financing	Poland	2003	54,500	10,000
Yaroslavl Municipal Water Services Development Programme	Russian Federation	2003	17,883	13,320

ZGOS-Zagreb Solid Waste Programme	Croatia	2003	33,000	18,810
Zagreb Solid Waste Management Programme	Croatia	1998	61,988	32,181
Zaporizhzhia- Water Utility Development & Investment Programme	Ukraine	1999	34,503	22,224
TOTAL			**5,250,784**	**1,564,039**

APPENDIX 2: Contact Information

CS-EBRD Contact Details

CS-EBRD
US Commercial Liaison Office to the EBRD
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US Commercial Service Contact Information for countries mentioned in this report

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Web: http://www.buyusa.gov/ukraine

Other Organizations

BISNIS: The Business Information Service for the Newly Independent States (BISNIS). Countries covered: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan, Turkmenistan, Russia, Ukraine, Uzbekistan.
Web: http://www.bisnis.doc.gov
Tel: (202) 482 4655
Fax: (202) 482 2293

CEEBIC: Central and Eastern Europe Business Information Center (CEEBIC). Countries of covered: Albania, Bosnia & Herzegovina, Bulgaria, Croatia, Macedonia, Romania, Serbia and Montenegro.
Web: http://www.export.gov/ceebic
Tel: (202) 482 2645
Fax: (202) 482 3898